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ABSTRACT

A review of the literature reveals that the knowledge professors of educational administration disseminate is not used in administrator preparation programs. This holds true both in the design of programs and in the use of specific methodologies in the management of the programs. The implementation of a range of management technologies, preferably by students within the programs, is one means of increasing the use of research knowledge in training programs. This would also increase program efficiency, enhance professor sensitivity, and enrich student experience. Empirical studies could provide the foundation for research about program effectiveness. Both school systems and departments of educational administration, as human systems, are appropriate subjects for the application of behavioral science approaches, and, to the extent that similar variables are inherent in both school systems and departments of educational administration, the discovery of similar variables by means of behavioral science approaches may ultimately facilitate the transfer of learning across system boundaries. It seems likely that the programs that make optimal use of knowledge will be the most successful. (Author/IRT)

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ADMINISTRATOR PREPARATION PROGRAMS

AS KNOWLEDGE UTILIZERS

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ADMINISTRATOR PREPARATION PROGRAMS AS KNOWLEDGE UTILIZERS

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The title of this paper bears the unfortunate implication that available knolwedge about educational administration is, indeed, utilized in preparation programs for educational administrators. My intent, however, is to indicate some aspects of such programs in which available knowledge is distinctly underutilized or unutilized. Specifically, the available conceptual and empirical knowledge about educational organizations has been strikingly disregarded in the management, the design, and the study of training programs -- a condition which might well contribute to the continuing, if not growing, credibility gap between practitioners and professors.

The Concise Edition of Webster's New World Dictionary provides a convenient definition of knowledge as a "range of information, awareness, understanding." For purposes of this paper, then, "knowledge" will be interpreted to refer to empirical data such as results from research, technical or interpersonal skill such as is acquired from experience, and theoretical frameworks or conceptualizations by which experience might be understood.

With this definition in mind, a review of the literature about preparation programs, as reported below, was undertaken. The literature, by its omissions if not by its content, suggested ways in which some of the knowledge that is

disseminated by professors might be utilized by them for the improvement of the very programs in which they function, especially for the management, design, and study of these training programs. Illustrations of specific applications of available knowledge follow the "Review of the Literature" section below and a conceptual-empirical foundation for an experimental program is offered.

Review of the Literature

The literature about preparation programs for educational administrators can be divided roughly into two categories: the literature about the design or content of such programs; and that in which studies of preparation programs are projected or reported. Within the former category are included selections about total programs as well as selections about such specific aspects of programs as recruitment, the internship, or particular instructional methods. The latter category consists of explorations of the persons and content of preparation programs.

Literature About Program Design

The literature about the design or content of preparation programs also fall roughly into two categories: that in which intuition or speculation serve as the basis for recommended program design; and that in which attempts were made to incorporate conceptual or empirical knowledge in recommended program design and content.

Prior to 1970, most discussants of program design used sets of assumptions about administrative processes or functions in education (Culbertson, 1963; Hencley, 1963; Wengert, 1962; Harlow, 1962) and the context of administrative

practice (Boyan, 1963; Lortie, 1962; Reller, 1962; Walton, 1962; Cunningham and Nystrand, 1969) or ideals about administrators' attributes (Culbertson, 1962; Willower, 1964) as the bases for deducing the recommended content of preparation programs. Many of these sets of administrative activities or environmental conditions represent the informed thinking of learned professors rather than taxonomies of processes and conditions or theoretical frameworks for the design of training programs. As displayed in a convenient summary outline by Nagle (1969, p. 63-4), the various sets of assumptions about the processes and context of administration showed not much comparability.

One implicit assumption apparently underlying all of this early literature was that the presentation of subject matter -- i.e., organizational theories and information about specific processes or technologies -- automatically results in learning. In the literature of the 1960's, in other words, the knowledge about organizational structure and process which was to be taught in educational administration courses was not explicitly linked to the structure and processes of preparation programs themselves.

A marked change in the literature about preparation programs can be noted in the literature of the 1970's. While less prone to deal with total program design and more likely to focus upon particular aspects of preparation programs, recent authors have tended to emphasize the applications of theoretical or empirical knowledge to the design of particular program elements. Hughes and Tanner (1970), for example, explained the use of Bayesian statistics and other research tools in the development of an evaluation of a special preparation program; Ramsey and Lutz (1973) described the use of communication theory in the design of internship programs; Gaynor and Duvall (1973) as well as Van Meter (1973) used existing knowledge to explicate particular instructional methodologies; Barrilleaux (1972) described a Management By Objectives approach

to the design of internships; and March (1973) used conceptualizations of "organized anarchies," a context of decline, and comparative advantages of universities, along with data about management behavior, as bases for recommending the teaching of five specific analytical skills.

Recent selections about total program design are similarly differentiated from the writings of the 1960's: recent authors have been more likely to address the utilization of specific domains of knowledge. Hatley and Miskel (1973), for example, used systems theory as the basis for initial and continuing program revision; Pohland and Blood (1973) developed a taxonomic base for the design of a complete preparation program; and Evan (1973) identified specific sociological, organizational, and systems concepts, as well as an experimental research design, as the foundation for a recommended experimental preparation program.

Promising as this trend may be, if one values the use of knowledge in all endeavors including the design of preparation programs, recent writings mark the very first halting steps. The recent authors used very strictly delimited bodies of knowledge -- far less knowledge than is available to us -- and their writings are in the realms of untried recommendations or untested practices. As Farquhar and Piele (1973) said of the literature they reviewed, "the majority of statements are relatively imprecise and general. There is much repetition of broad platitudes, but little explicit analysis of trends and needs (p. 56)."

Literature About the Study of Programs

The studies of preparation programs do not (yet) appear to be following a similar trend toward increased knowledge utilization: all but two of the reported studies are in the survey mode; and, while the two reported theory-

based studies (Steinhoff and Bishop, 1973; Bernstein, 1974) were undertaken recently, other recent studies have been predominantly in the survey mode (Campbell and Newell, 1973; Sims, 1970; Kline and Munsterman, 1974 and 1975), and additional surveys are projected: an instrument is currently being prepared for a survey of preparation programs in the United States; analyses of the data in the UCEA-CORPS data bank at Purdue, exclusively survey data, will be undertaken during 1975, 1976, and 1977. Illustrative of the numerous surveys of preparation programs in educational administration are the UCEA (1973) study of "The Preparation and Certification of Educational Administrators," and the AASA (1965) "Study of Graduate Programs of Preparation for Superintendents of Schools."

It is clear, from a review of the studies of preparation programs, that most of the theoretical or conceptual bases upon which productive studies of school systems or administrative behavior have been founded, though probably applicable to the study of preparation programs, have not been utilized in the study of such programs. It follows that many research methodologies, also extolled for their efficacy in the generation of empirical knowledge, have likewise been disregarded in the study of preparation programs. We continue to be inundated with torrents of survey data, much of it of such doubtful validity that it is small wonder the recommendations flowing from such studies are rarely, if ever, implemented. As Farquhar and Piele (1973) pointed out, "Apparently, program designers hesitate...to view the study of and experimentation with preparatory programs as legitimate areas of scholarly endeavor (p. 56)."

Knowledge Utilization in Preparation Programs

Knowledge Utilization in Program Management

On the subject of the management or administration of preparation programs for educational administrators, there appears to be no literature whatsoever. From the total absence of such references, one might assume -- hopefully, erroneously -- that such programs are hardly managed at all! But perhaps a safer assumption would be that the management of preparation programs is not characterized by the systematic, intentional utilization of available knowledge about the administration of educational organizations. This, then, might be the most suitable starting point for discussion of ways in which available knowledge could beneficially be applied within preparation programs.

Courses in educational administration frequently concern technologies to which students are exposed and which students are exhorted to employ. Yet, in the available literature, no programs are cited in which such technologies are applied to the design, implementation, or development of administrator training. Such planning technologies as Planning-Programming-Budgeting Systems, Operations Research, Delphi, or force analysis (See Culbertson, 1973), for example, do not appear to have been utilized as a means of planning preparation programs.

A PPBS-MBO example might suffice to illustrate the absence of technology in program management. The very image of professors preparing diaries for a program budget, or obsequiously submitting lists of objectives for a departmental Management By Objectives is almost too ludicrous to contemplate. Perhaps professors value their time, their autonomy, and their professionalism too much to submit to such requests. Perhaps teachers and administrators, sharing similar values, resist equivalent requests from

their superordinates. It would seem, therefore, that attempts to apply PPBS-MBO technologies to preparation programs themselves would reveal some shortcomings of these popular catchword technologies and, at very least, sensitize professors to the real problems -- moral and operational -- of implementation.

To my knowledge, refined Management Information Systems regarding professors, students, or alumni, such as could be used for the rational, efficient allocation of human resources in terms of specialized knowledge, interests, and skills, to not exist within preparation programs; nor do computer-based Flexible Modular Schedules, hierarchically differentiated staff, cost/effectiveness measures or, indeed, any of the other popular, or even unpopular, technologies.

From at least two perspectives, apart from the increased sensitization of professors, the application of administrative skills (technical knowledge) to the management of preparation programs would have beneficial effects: first, the programs themselves might be more efficiently and effectively conducted; second, students would enjoy renewed belief that their mentors do, after all, know how to administer an educational organization and that the techniques lauded in the textbooks work to some advantage. If, furthermore, the students themselves were encouraged to implement various technologies within the department of educational administration, the benefits of "learning by doing" (See Downey on an "action-study approach", 1973, p. 9) and the oft-ignored psycho-motor dimension of learning would likely be increased.

Knowledge Utilization in Research About Programs

In research as well, the concepts, theories, and methodologies espoused within preparation programs could well be applied to studies of the programs

themselves. Surely, studies of departments of educational administration as learning systems, as economic or political phenomena, as decision structures, compliance structures, communication networks, open systems, and numerous other types of entities would yield profound as well as practical knowledge about professional preparation in education (See Silver, 1975).

Since the 1950's, when the "theory movement" began to predominate the thinking about administrator training, a broad range of theoretical frameworks, conceptualizations, and research methodologies has been borrowed from the various behavioral sciences and applied to the study of school systems and administrators (See Culbertson et al., 1973). So productive has the "theory movement" been in generating knowledge about school organizations and providing new perspectives on human behavior in school organizations that the relative absence of social science perspectives or methodologies in the study of preparation programs seems quite remarkable. In addition to knowing how many students are admitted to programs, the admissions criteria, the titles of content of courses, the characteristics of professors, and the like, we could be discovering what preparation programs are, how they function, and why they function as they do.

A few theory-related questions might serve to illustrate the kinds of knowledge about preparation programs that could be gleaned through the application of behavioral science knowledge (theoretical and empirical) to the study of such programs:

1. Does learning occur within preparation programs? If so, what learning occurs and by what modes? To what characteristics of organizational structure, professors' behaviors, student personalities, or other variables is student learning of various types related?

2. What are the organizational structures of departments of educational administration? What are their communication and decision-making patterns? How complex are they in structure? What are the power or compliance relationships within departments?

3. How do departments of educational administration respond to external forces? With what policies, tactics, or strategies do departments respond to environmental inputs? What are the characteristics of environments of departments, and how do inputs occur?

4. How do professors of educational administration behave vis a vis their students? What are the types and contexts of professor-student interactions? What needs, values, attitudes, beliefs, and ideologies of professors and students are related to various interaction styles and outcomes?

The kind of research suggested here seems to be a prerequisite for attempts to improve preparation programs; for until we know what the programs are and what effects their various dimensions have on students, we can hardly be guided by anything more substantive than speculation, aspiration, and intuition in the improvement of programs. Similarly, attempts to acquire knowledge about the effects of preparation on administrator performance would have to follow such research as is suggested here; for unless we know something about the relevant dimensions of training programs, we have no variables to which to relate postgraduate administrative performance.

Knowledge Utilization in Program Design

Utilization of knowledge in the design of preparation programs, except as may be informed by empirical data in the future, is a more elusive endeavor. For one thing, it implies experimentation, an inexact, expensive, and risky venture that entails vexing ethical questions and the possibility of embarrassing exposures through evaluations. Further, the very immaturity (or ineffectiveness) of our field (Ravetz, 1971) connotes insecurity about

the soundness of our knowledge and, possibly, controlling mechanisms which preclude rigorous inquiries about our knowledge and practices. Nevertheless, if we expect students to apply knowledge to the analysis and design of educational systems, and if we intend them to modify their behavior, we should probably be willing to do the same.

Without asserting that we have sufficient knowledge about all the relevant dimensions of administrator preparation in education, one could maintain that there are more domains of knowledge relevant to administrator training than we currently use with premeditation in preparation programs. Knowledge about operant conditioning, socialization, and force fields would be illustrative: while these phenomena can be assumed to operate within educational administration departments, no systematic efforts appear to have been made to design situations in which these phenomena could more effectively enhance learning. Other conceptual knowledge, especially when supported by empirical data, could at least be incorporated in program design if not used as the foundation for program design.

One additional example might illustrate the point more fully. Thirteen years ago Culbertson (1962) projected an ideal of an administrator as a "perceptive generalist," an individual who "will need a breadth of vision (p. 153)," will have "the capacity to fashion appropriate relationships between the purposes of the schools and the ever-changing society they serve (p. 154)," and will be able "to learn new fields of application quickly and to relate them to social and educational values (p. 154)." Willower (1964) later reinforced this image with a conception of the administrator as a "reflective generalist," one who blends a theoretical perspective and a quest for knowledge with humane values. Schwab (1964) wrote of the administrator as "the outcome of a complex marriage, interaction,

and tension between theory and practice (p. 64);" and Miller (1967) expressed a desire to promote the "scholar-practitioner" administrator. Recent research based on conceptual systems theory (Schroder et al., 1967) lends such profound support for this prophetic ideal that the training of administration students to be such individuals might be within the realm of possibility.

In research based upon conceptual systems theory it has been found that individuals who have relatively high conceptual levels of "integrative complexity," sometimes known as relational thinking, in the interpersonal domain of cognition exhibit characteristic behaviors: they exhibit "a tendency to remain cognizant of ambiguity and open to new information even after a decision has been reached (Sieber and Lanzetta, 1964, p. 637);" they demonstrate greater breadth of category search for information (associated with ability to deal creatively with environment) than do individuals with simpler conceptual structures (Karlins, 1967); they tend to be more confident of their judgments of incongruent stimuli than those with lesser integrative complexity (Bieri, 1971); they are relatively more open to other people's perspectives and more able to change impressions of others as new information becomes available (Schroder, 1971); and they tend to be more communicative with others (Schroder, et al., 1967). Elementary school principals characterized by higher levels of integrative complexity were found to be more Person Oriented in leadership style and likely to be located in more complex interpersonal school settings (Silver, 1975b). In terms of theoretical knowledge and empirical data, in other words, it would appear that individuals with relatively high levels of conceptual complexity can actualize the "perceptive generalist" ideal projected in the 1960's.

Levels of conceptual complexity appear to be learned in the home environment (Harvey, 1964), the school environment (Schroder, et al., 1973), or the college environment (Joyce and Weil, 1973). It would seem that we have sufficient theoretical and empirical knowledge to justify experimentation with administrator training programs designed to increase conceptual complexity of administrators. Programs incorporating efforts to increase integrative complexity of students would include: numerous complex problem-solving tasks with appropriate feedback; many leadership opportunities, likewise with appropriate feedback; a diversified and ambiguous environment with ample opportunity to explore, sample, and test one's abilities; encouragement of divergence and diversity; and challenging new instructional materials such as complex computer-based simulations and information-rich multi-media simulations.

Such a program has yet to be designed, studied, and rigorously tested. It represents, however, one of many possible examples of potential knowledge utilization for the design of preparation programs in educational administration.

Summary and Conclusion

A review of the literature about preparation programs in educational administration revealed that much of the knowledge which is disseminated by professors of educational administration is not utilized within the training programs themselves. As regards the design of programs, for example, the literature of the 1960's contains no explicit applications of theoretical or empirical knowledge to program design, and in more recent articles one conceptualization or technology has generally been applied to one facet of program design. In the study of preparation programs, theoretical bases for

research and disciplined methodologies have rarely been applied, and there appears to be no trend toward increased knowledge utilization for research. With regard to the management of preparation programs, there is no literature whatsoever to inform assessments of the degree of knowledge utilized in the administration of the programs.

Because of the apparently minimal utilization of knowledge in the context of training programs themselves, suggestions for increasing knowledge utilization were offered. The implementation of a range of management technologies, preferably by students within preparation programs, was suggested as a means of increasing program efficiency, enhancing professors' sensitivity, and enriching students' experiences. A series of theory-related questions was suggested as the bases for studies which would provide empirical foundations for research about program effectiveness. Finally, the application of knowledge to program design was suggested and one available domain of knowledge, conceptual systems theory, was offered as illustrative of a foundation for an experimental preparation program.

It should be noted that these suggestions are not intended to imply isomorphism between public schools or school systems and departments of educational administration. There are, however, two premises upon which the suggestions are based: both school systems and departments of educational administration, as human systems, are appropriate subjects for the application of behavioral science approaches; to the extent that similar variables are inherent to both school systems and departments of educational administration, their discovery by means of behavioral science approaches may ultimately facilitate the transfer of learning across system boundaries.

There is a fundamental discrepancy, it seems, between the content of preparation programs and behavior within those programs, between the ideology

of professors who espouse knowledge utilization and action on the part of those professors. This discrepancy might contribute, directly and indirectly, to the current economic crisis with which departments of educational administration are faced, for it minimizes efficiency, impedes data-based program development, and curtails rational program design. It seems likely, therefore, that the preparation programs which make the most successful adaptations to changing environments over time will be those in which knowledge is optimally utilized in the future.

REFERENCES

AASA, A study of graduate programs of preparation for superintendents of schools. American Association of School Administrators, Committee for the Advancement of School Administrators, 1965.

Barrilleaux, L., Behavioral objectives for administrative internships: School principals, Educational Administration Quarterly, 1972, VIII, 1, 59-71.

Bernstein, W., Relationships among graduate students' value-orientations, personality needs and perceptions of organizational climate in New York State universities and colleges offering graduate programs in educational administration. Unpublished doctoral dissertation, New York University, 1974.

Bieri, J., Cognitive structures in personality. In Schroder, H. and Suedfeld, P. (Eds.), Personality theory and information processing. New York: Ronald Press, 1971, 178-208.

Boyan, N.J., Common and specialized learnings for administrators and supervisors: Some problems and issues. In Leu, D.J. and Rudman, H.C. (Eds.), Preparation programs for school administrators: Common and specialized learnings. East Lansing, Michigan: Michigan State University, 1963, 1-23.

Campbell, R.F. and Newell, L. J., A study of professors of educational administration: Problems and prospects of an applied academic field. Columbus, Ohio: The University Council for Educational Administration, 1973.

Culbertson, J.A., Common and specialized content in the preparation of administrators. In Leu, D. J. and Rudman, H. C. (Eds.), Preparation programs for school administrators: Common and specialized learnings. East Lansing, Michigan: Michigan State University, 1963, 34-60.

Culbertson, J.A., Educational planning and the professorial role, The Journal of Educational Administration, 1973, XI, 2, 203-215.

Culbertson, J.A., New perspectives: Implications for program change. In Culbertson, J. and Hencley, S. (Eds.), Preparing administrators: New perspectives. Columbus, Ohio: The University Council for Educational Administration, 1962, 151-173.

Culbertson, J.A., Farquhar, R. H., Fogarty, B.M., and Shibles, M.R. (Eds.), Social science content for preparing educational leaders. Columbus, Ohio: Charles E. Merrill Publishing Company, 1973.

Cunningham, L.L. and Nystrand, R., Toward greater relevance in preparation programs for urban school administrators. Educational Administration Quarterly, 1969, V, 1, 6-23.

Downey, L., The context as crucible: An analysis of the knowledge utilization underground, UCEA Newsletter, 1973, XIV, 3, 6-9.

Evan, W.M., Some occupational and organizational implications for designing an experimental program in educational administration, The Journal of Educational Administration, 1973, XI, 2, 216-243.

Farquhar, R.H. and Piele, P. K., Preparing educational leaders: A review of recent literature, ERIC/CEM-UCEA Series on Administrator Preparation. Columbus, Ohio: The University Council for Educational Administration, 1973.

Gaynor, A.K. and Duvall, L.A., Role simulation in educational administration: Some issues and developments, The Journal of Educational Administration, 1973, XI, 1, 60-68.

Harlow, J.G., Purpose-defining: The central function of the school administrator. In Culbertson, J.A., and Hencley, S. (Eds.), Preparing administrators: New perspectives. Columbus, Ohio: The University Council for Educational Administration, 1962, 61-71.

Harvey, O.J., Some cognitive determinants of influencibility, Sociometry, 1964, 27, 208-221.

Hatley, R.V. and Miskel, C.G., Administrator preparation programs: A systematic revision, Planning & Changing, 1973, 4, 3, 165-174.

Hencley, S.P., Functional interrelationships within administrative performance systems. In Leu, D.J. and Rudman, H.C. (Eds), Preparation programs for school administrators: Common and specialized learnings. East Lansing, Michigan: Michigan State University, 1963, 61-95.

Hughes, L.W. and Tanner, C.K., An evaluation procedure for a new program to prepare administrator change agents, Educational Administration Quarterly, 1970, VI, 2, 46-55.

Joyce, B.R. and Weil, M., The teacher-innovator models of teaching as core of teacher education, Interchange, 1973, 4, 2/3, 47-60.

Karlins, M., Conceptual compexity and remote associative proficiency as variables in complex problem-solving tasks, Journal of Personality and Social Psychology, 1967, 6, 3, 264-278.

Kline, C.E. and Munsterman, R.E., Doctoral student characteristics: UCEA Student Data System, 1973-1974, UCEA Review, 1975, XVI, 3, 21-26.

Kline, C.E. and Munsterman, R.E., UCEA Student Data System, 1973-1974: Participation, preferences and positions, UCEA Review, 1974, XVI, 2, 19-22.

Lortie, D.C., Complexity, specialization and professional knowledge: Overall strategies in the preparation of school administrators. In Culbertson, J.A. and Hencley, S.P. (Eds.), Preparing administrators: New perspectives. Columbus, Ohio: The University Council for Educational Administration, 1962, 73-88.

March, J.G., Analytical skills and the university training of educational administrators. Paper presented as the Seventh Annual Walter D. Cocking Memorial Lecture, NCPEA, August, 1973.

Miller, V., From the Editor's desk: Promoting the scholar-practitioner, Educational Administration Quarterly, 1967, III, 3, 212-215.

Nagle, J., Design and rationale for a doctoral level preservice program in educational administration, Unpublished doctoral dissertation, University of Pittsburgh, 1969.

Pohland, P.A., and Blood, R.E., Toward a multi-dimensional model of a leadership-in-administration preparation program, Planning & Changing, 1973, 4, 3, 144-156.

Ramsey, M.A. and Lutz, F.W., The internship in school administration: A review of its history and a conceptualization for the future, Planning & Changing, 1973, 4, 3, 135-143.

Ravetz, J.R., Immature and ineffective fields of inquiry, Scientific knowledge and its social problems. Oxford: Clarendon Press, 1971, 364-402.

Reller, T.L., A comprehensive program for the preparation of administrators. In Culbertson, J.A. and Hencley, S.P. (Eds.) Preparing administrators: New Perspectives. Columbus, Ohio: The University Council for Educational Administration, 1962, 103-119.

Schroder, H. M., Conceptual complexity and personality organization. In Schroder, H.M. and Suedfeld, P. (Eds.), Personality theory and information processing. New York: Ronald Press, 1971, 240-273.

Schroder, H.M., Driver, M.J., and Streufert, S., Human information processing. New York: Holt, Rinehart, and Winston, 1967.

Schroder, H.M., Karlins, M. and Phares, J., Education for freedom. New York: John Wiley & Sons, Inc., 1973.

Schwab, J.J., The professorship in educational administration: Theory - art - practice. In Willower, D. and Culbertson, J.A. (Eds.), The professorship in educational administration. Columbus, Ohio: The University Council for Educational Administration, 1964, 47-60.

Sieber, J.E. and Lanzetta, J.T., Conflict and conceptual structure as determinants of decision-making behavior, Journal of Personality, 1964, 32, 622-641.

Silver, P.F., A study of preparation programs: A proposed research direction for UCEA. Paper presented at the UCEA Plenary Session, February, 1975a.

Silver, P.F., Principals' conceptual ability in relation to situation and behavior, Educational Administration Quarterly, 1975b (in press).

Sims, P.D., Assessment of the quality of graduate departments of educational administration. Unpublished doctoral dissertation, University of Wisconsin, 1970.

Steinhoff, C. and Bishop, L., Factors differentiating preparation programs in educational administration: UCEA study of organizational environment, Educational Administration Quarterly, 1974, X, 2, 35-50.

UCEA, The preparation and certification of educational administrators: A UCEA commission report. Columbus, Ohio: The University Council for Educational Administration, 1973.

Van Meter, E., Theory in educational administration: An instructional module teaching approach, Educational Administration Quarterly, 1973, IX, 3, 81-95.

Walton, J., The education of educational administrators. In Culbertson, J.A. and Hencley, S. P. (Eds.), Preparing administrators: New perspectives. Columbus, Ohio: The University Council for Educational Administration, 1962.

Wengert, E.S., Preparing school administrators: Some problems and issues. In Culbertson, J.A. and Hencley, S.P. (Eds.), Preparing administrators: New perspectives. Columbus, Ohio: The University Council for Educational Administration, 1962, 35-59.

Willower, D. J., The professorship in educational administration: A rationale. In Willower, D.J. and Culbertson, J.A., (Eds.) The professorship in educational administration. University Park, Pennsylvania: The Pennsylvania State University, 1964, 87-105.